

REMARKS

This response is submitted in response to the Office Action dated October 15, 2007. In the Office Action, claims 1 – 3 were rejected under 35 U.S.C. 102(b) as allegedly being anticipated by WO 98/02700 (“Tiitu”). In addition, claim 4 was rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Tiitu in view of U.S. Patent No. 4,417,661 issued to Asman (“Asman”). Claims 5 – 7 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Tiitu in view of U.S. Patent No. 6,415,527 issued to Rasenen et al. (“Rasanen”).

Claims 1, 3 and 4 are amended. No new Claims are added. Claims 1 – 8 remain pending. Reconsideration and continued examination of the above-identified application are respectfully requested in light of the amendments and remarks herein.

I. Rejection Under 35 U.S.C. 102(b)

As mentioned above, independent claim 1 is rejected in view of Tiitu. Tiitu discloses a cylindrical rotatable drum 17 and a steam tube system 18¹ – 18ⁿ formed of concentric steam tube rings, wherein each steam team group 18¹ – 18ⁿ is connected to steam manifold 27,¹ and lifting blades 30 inhibiting material from sliding on the inner face of the drum.²

In contrast, the instant invention provides a heat transfer element having a plurality of longitudinal pipes in the axial direction of a drum, the heat

¹ Page 4, lines 7-20

² Page 4, lines 29-31

assembly self-supported by a support structure coupled to the longitudinal pipes and attached to the drum frame with a fastening that allows heat expansion. Applicant respectfully submits that Tiitu provides no teaching of a heat transfer element formed as a uniform packet of longitudinal pipes arranged in the axial direction of the drum. Further, Tiitu provides no teaching of a fastening attached to the drum that allows heat expansion. Tiitu as relied upon simply teaches concentric heat rings coupled to a steam manifold.

Further, no teaching is provided in Tiitu for a heat transfer element formed of longitudinal pipes arranged in the axial direction of the drum as recited in independent claim 1. As shown in Tiitu, Figs. 1 and 2, the steam tube system 18¹ – 18ⁿ is formed of a plurality of concentric rings. In fact, Tiitu³ expressly teaches away from steam tubes placed in a direction parallel to the axis of the drum.

Additionally, no teaching in Tiitu is provided for a support structure coupled to the longitudinal pipes, the support structure attached to the drum frame with fastening that allows heat expansion. Neither the steam manifold 27 nor the lifting blades 30 as taught by Tiitu allow for heat expansion. Further, the lifting blades, as taught by Tiitu, inhibit material from sliding on the inner face of the drum. Using the arrangement as presented in claim 1, heat transfer elements are pressed and wedged firmly against guides due to heat expansion.⁴ As such, one of ordinary skill in the art would see the benefit in providing a fastening that allows for heat expansion as recited in claim 1.

In short, Applicant submits that Tiitu does not teach or disclose a heat transfer element formed of longitudinal pipes arranged in the axial direction of the drum, a support structure coupled to the longitudinal pipes or the support structure attached to the drum frame with a fastening that allows heat expansion and as such, fails to anticipate or render obvious the claims. Accordingly, claim 1 is now in condition for allowance.

II. Rejection Under 35 U.S.C. 103(a)

Referring to claim 4, Applicant submits Asman, alone or in combination with the other cited references, fails to teach each and every claim limitation.

The Office Action relies on Asman,⁵ to teach an abrasion resistant plate and protection plate. Asman teaches a drum 10 having a hollow journal section 14, the hollow journal section 14 having a hollow passage to receive a tubular element for steam injection.⁶ As illustrated in FIG. 1 of Asman, tube 15 is secured to dryer drum 10 by flange 20 in sealing relation therewith and bolted to the head 12.⁷ In sharp contrast, claim 4 recites an abrasion resistant plate is arranged between the heat transfer element and the drum. Applicant submits that, Asman provides no teaching of a abrasion resistant plate. Further, Asman does not disclose or suggest an abrasion resistant plate arranged between a heat transfer element and the drum.

³ Page 1, lines 25-30

⁴ See *Specification*, ¶ [0012]

⁵ Column 2 line 54 through column 4 line 68

⁶ Column 2 lines 53 – 54

⁷ Column 2 lines 60 – 66

Because the Office Action has failed to provide a combination of references that teaches each and every element of the claims, the Office Action has failed to establish a *prima facie* case of unpatentability. To establish *prima facie* obviousness of the claimed invention, all of the claim limitations must be taught or suggested by the prior art. In *re Royka*, 490 F.2d 981, 180 USPQ 5890 (CCPA 1974). Accordingly, Applicants respectfully request withdrawal of the rejection based on 35 U.S.C. 103 and reconsideration of the claims.

Referring to claim 5, an apparatus is recited with similar elements to claim 1, and is therefore patentably distinguishable from the cited prior for similar reasons as discussed above. Further, Applicant submits Rasanen, alone or in combination with the other cited references, fails to teach at least one steam manifold at the end of the heat transfer element, the steam manifold connected to a steam pressure vessel with a connecting pipe, as recited in claim 5.

The Office Action relies on Rasanen⁸, to teach at least one manifold connected to a steam pressure vessel with a connecting pipe. However, the Office Action does not clearly indicate which elements of Rasanen are relied upon. Further, the system disclosed by Rasanen makes no provision for a manifold. It is assumed that Office Action equates the steam distribution header 17 of Rasanen with the steam pressure vessel 17 of claim 5. Rasanen teaches a steam distribution header 17 coupled to a plurality of connector pipes 18 which

are coupled to hoses 19⁹. This limited teaching of a plurality of hoses is simply ineffective to teach a manifold and could not be understood as such by one of ordinary skill in the art. Further, the system of Rasanen requires the use of a plurality of hoses and pipes. Using the arrangement as presented in claim 5, “only one pipe or hose is required for connecting each side of the heat transfer element to the steam pressure vessel. The material to be dried does not damage a large number of pipes or hoses.”¹⁰ In view of this disclosure, one of ordinary skill in the art would not have been motivated to ignore this expressly disclosed benefit in order to include a manifold as recited in claim 5.

Claims and 2 — 4 and 6 — 8 are patentably distinguishable over the prior art at least by virtue of their dependency from independent claims 1 and 5.

⁸ Column 3 line 53 through column 4 line 56

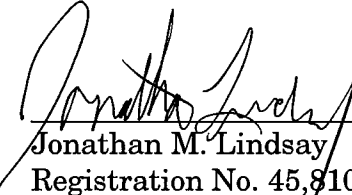
⁹ Column 4 lines 50 — 60

¹⁰ See *Specification*, ¶ [0007]

For at least the reasons stated above, it is respectfully requested that the rejection of claims 1 – 8 be withdrawn. If there are any questions regarding this response or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

Respectfully submitted,

January 15, 2008



Jonathan M. Lindsay
Registration No. 45,810
Kimberley G. Nobles
Registration No. 38,255

CROWELL & MORING LLP
Intellectual Property Group
P.O. Box 14300
Washington, DC 20044-4300
Telephone No.: (949) 263-8400
Facsimile No.: (202) 628-8844
JML/atb

#4123836